

Safety at Train Platform Edges & Detectable Warnings

This white paper addresses the requirements for detectable warnings along the edges of rail platforms. The information contained in the white paper represents the professional opinion of Meeting the Challenge, Inc. (MTC). It does not constitute a legal opinion or an enforceable position. Only the Federal government can enforce the Americans with Disabilities Act (ADA).

The 2010 ADA Standards for Accessible Design¹ (ADA Standards) indicate that detectable warning must be provided along train platforms:

705.2 Platform Edges. Detectable warning surfaces at platform boarding edges shall be 24 inches (610 mm) wide and shall extend the full length of the public use areas of the platform.

Note that in this statement there is no explicit requirement for the placement of the detectable warning material relative to the platform edge other than the somewhat indeterminate “at.” Since the term is not explicitly defined, we must make some assessment of what is intended. This language is also consistent with the proposed 2011 Public Rights of Way Accessibility Guidelines² (PROWAG) and the 2003 ANSI A117.1 standards³.

One of the earliest precedent-setting applications is found in the Washington Metro Area Transportation Authority (WMATA). WMATA’s metro rail system runs throughout the Washington, DC area includes a granite edge with embedded lights that indicate a train is approaching. The detectable warning material is placed immediately behind this granite edge (approximately 12 inches from the edge of the platform).



WMATA train platform showing detectable warning material behind granite edge.⁴

¹ 2010 ADA Standards for Accessible Design, U.S. Department of Justice, September 15, 2010.

² Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way, U.S. Access Board, July 26, 2011.

³ 2009 IBC and ICC/ANSI A117.1-2003, International Code Council, Inc., July 2009.

⁴ WMATA Anacostia Train Station with 500-Series Train, Wikimedia Creative Commons.

Some rail systems have installed detectable warning material all the way to the platform edge. This type of installation has been problematic as the detectable warning tiles become chipped and broken due to contact with arriving and departing trains.

The intent of detectable warnings is twofold: to warn individuals that they are about to enter a potentially hazardous area, and that the area of detectable warning material is a safe area. The 24-inch width of the detectable warning material provides sufficient opportunity for the individual to become aware of the hazard and slow their approach to determine the nature of the hazard. It is therefore important that the hazard become apparent soon after the detectable warning material stops. Clearly if the platform edge is a significant distance beyond the detectable warning material this determination will be more difficult. If the platform edge was 36 inches beyond the detectable warning an individual could get completely beyond the warning material and even be walking parallel to the platform edge within a very hazardous area. However, it is also true that if the detectable warning material continued right to the platform edge, an individual standing in this “safe” area might be struck by an approaching train or the wind surge that accompanies it.

The question then becomes what is a reasonable distance from the platform edge for the detectable warning material to end. We believe that designs which indicate approximately a six-inch upturned edge are consistent with the requirement that detectable warning material be provided “at” platform boarding edges.

It should also be noted that this relationship of the detectable warning material to the platform edge should be consistent throughout a rail line. The consistent nature of the design is an important factor in helping people use the warning feature safely and effectively.